MISSOURI
DEPARTMENT OF
NATURAL RESOURCES
Air Pollution Control Program

Missouri Clean Diesel Program for 2015

Through the 2015 Missouri Clean Diesel Program, the following six school districts received awards of up to $19,750 – or 25 percent of the cost of new diesel-powered school buses:

The Knox County R-1 School District's new bus is more environmentally friendly and more efficient than the bus it replaced.

* Knox County R-1 School District in the northeastern Missouri city of Edina

* School of the Osage in south-central Missouri

* Orchard Farm R-V School District in St. Charles, west of St. Louis

* Ripley County R-III School District in the southern Missouri town of Gatewood

* Sullivan School District, about 65 miles southwest of St. Louis

* Rich Hill R-IV School District, about 80 miles south of Kansas City in western Missouri

Replacing a school bus built in 2000 with a new model reduces air pollution, according to

Children in the Sullivan School District pose in front of the new bus purchased with the help of federal funds administered by the department.

the U.S. Environmental Protection Agency. For instance, emissions of carbon monoxide fall by 60 percent, and emissions of particle pollution fall by 97 percent. Emissions of other pollutants also decrease, including precursors of ground-level ozone, a dangerous lung irritant.

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Six school districts in Missouri received partial funding to replace older buses earlier than scheduled. Shown are buses for Ripley County R-III (left) and Orchard Farm R-V (above).

Twenty-three owners or operators of school buses in Missouri applied for the program, and the Missouri Department of Natural Resources chose the winners in a drawing. To ensure that the program resulted in emission reductions, the grant required permanent disabling of the old buses.

The 2015-2016 school year marked the second time that the department earmarked federal funds for school buses through the U.S. Diesel Emissions Reduction Act. During the 2013-2014 school year, the department's Air Pollution Control Program administered funds that paid for up to 25 percent of the cost of new school buses for five Missouri owners of school buses.

The estimated annual and lifetime reductions in emissions from replacing the six buses appear in the table below. The department calculated the projected emission reductions with the EPA Diesel Emissions Quantifier. (Click on the link to learn more about the emissions quantifier.)

Emission Reductions
Attributed to the 2015 Missouri State Clean Diesel Program
Computed using the EPA Diesel Emissions Quantifier

	Nitrogen Oxides	Particulate Matter	Hydrocarbons	Carbon monoxide
Annual Reductions (tons/year)	0.570	0.035	0.059	0.221
Lifetime Reductions (tons)	9.216	0.576	0.958	3.586

The department's air program is committed to reducing diesel emissions in Missouri. Diesel emissions contain oxides of nitrogen as well as volatile organic compounds, which in the presence of sunlight react to form ground-level ozone, the pollutant of most concern statewide in Missouri. Ozone is known to cause and aggravate respiratory diseases, such as asthma and emphysema. Missouri currently has several areas in the state violating or close to violating EPA's standard for ozone. The EPA sets the health-based standard to establish limits on

concentrations of ground-level ozone.

Diesel emissions also contain fine particulate matter, which can penetrate past natural defenses into people’s lungs. This can lead to lung and respiratory diseases, including lung cancer. Reducing diesel emissions, particularly in high population areas and areas that have especially high concentrations of air pollutants, is vital to the program’s mission of protecting public health.